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Arizona Corporation Commission
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Exhibit #: Preliminary 1, 2

- 30 miles of 345-kV double-circuit electric transmission line between New Mexico State Route 9 (NM 9) and Interstate 10 (I-10) east of Deming in Luna County, New Mexico, to provide access for potential renewable energy generation sources in southern New Mexico. This segment of the Project is included in the analysis, but development of this segment will be determined at a later date;
- one new substation in Luna County (proposed Midpoint Substation) to provide an intermediate connection point for future interconnection requests; and
- substation expansion for installation of new communications equipment at, and connection to, two existing substations in New Mexico and one in Arizona.

The Upgrade Section (Apache–Saguaro) will include:

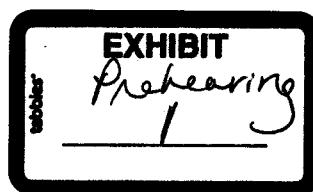
- replacing 120 miles of Western's existing Saguaro–Tucson and Tucson–Apache 115-kV single-circuit electric wood-pole H-frame transmission lines, which date to 1951, with a 230-kV double-circuit electric steel-pole transmission line. In locations where needed and where possible, an additional 50 feet of ROW adjacent to the existing 100-foot ROW will be obtained for the new 230-kV line. This Upgrade Section is defined by endpoints at the existing Apache Substation, south of Willcox in Cochise County, Arizona, to the existing Saguaro Substation, northwest of Tucson in Pinal County, Arizona;
- 2 miles of new build double-circuit 230-kV electric transmission line to interconnect with the existing Tucson Electric Power Company (TEP) Vail Substation, located southeast of Tucson and just north of the existing 115-kV Tucson–Apache line; and
- connections to, upgrading of, and modifications to or expansions at 12 existing substations in southeastern Arizona, including installation of new bays, transformers, breakers, switches, communications equipment, and related facilities associated with the voltage increase and compatibility with the existing substations. Depending on design and engineering considerations, at some locations substation expansions may require a separate yard.

1.3 PURPOSE OF THE PLAN OF DEVELOPMENT

This POD was developed to meet the requirements outlined in 43 Code of Federal Regulations (CFR) 2804.25(b). Under these requirements, the BLM may request information necessary to process a ROW application; this request for information may include a detailed construction, operation, rehabilitation, and environmental protection plan, i.e., a "Plan of Development," and any needed cultural resource surveys or inventories for threatened or endangered species. On Federal lands administered by the BLM, the POD is an enforceable stipulation of the BLM ROW grant and pertains not only to the construction of the Project, but also to the operation and maintenance phase of the Project. On other lands, Southline or Western will adopt the stipulations and measures in the POD, where appropriate.

This POD outlines the stipulations and mitigation measures (herein also Proponent Committed Environmental Measures (PCEMs)) identified in the Environmental Impact Statement (EIS) that must be followed during construction, operation, and maintenance of the Project, for which the BLM and Western are the joint lead federal agencies. The POD also is intended to be used Project-wide as (1) a summary of Project environmental requirements and protection measures, and (2) a description of the processes and procedures that will be used to ensure compliance with the requirements of the BLM, Western, and other Federal, State, and/or local agencies, as appropriate.

While neither BLM nor Western has the authority to enforce the POD and its PCEMs on State or private lands, BLM expects that most landowners would want the same protections afforded resources on BLM



administered lands to be extended to their properties as well. Therefore, BLM anticipates that the PCEMs and other specific stipulations and methods identified in the POD will largely be implemented over the entire length of the Project, regardless of jurisdiction. Since Southline and Western will have to obtain ROW leases from other Federal and State agencies, and many different private landowners, it is not possible at this time to identify the specific provisions applicable to these leases. Most of the PCEMs are based in laws, regulations, permit requirements, BMPs, and standard construction practices, and would be implemented on non-BLM lands, although inspections, monitoring, and reporting would likely be handled through different processes and procedures.

The agencies recognize that the POD is a living document and as such provisions therein may be modified, augmented, or deleted as appropriate. For non-BLM administered lands Western will likely be the lead Federal agency overseeing implementation of and compliance with the suite of PCEMs and other environmental protections identified in the EIS and supporting documents. State and private landowners may add additional requirements to those identified in the EIS and POD, or opt out of certain measures, as negotiated by Southline and/or Western with each landowner during ROW acquisition. Certain parts of the POD will not be applicable to or appropriate for non-BLM administered lands; examples include BLM reporting requirements, stipulations specific to the BLM's ROW grant, or the BLM variance process. BLM's environmental inspection and verification process is also quite different from Western's, and Western's process would be followed on State and private lands. Regardless of which agency is the lead, or the differences in the process followed, the environmental protections identified and committed to in the EIS will be implemented (with the possible exception of the landowner required additions or deletions mentioned above). On BLM administered land, all stipulations and PCEMs identified as applicable in any of the POD volumes should be adhered to for the life of the BLM ROW grant.

The BLM Las Cruces District Office and the Safford and Tucson field offices have required ROW grant holders to contract with an independent entity (i.e., a compliance inspection contractor (CIC)), who will conduct environmental compliance inspections during the construction phase of the Project. The objective is to monitor for compliance with environmental stipulations designed to protect the environment and prevent impacts from exceeding those described in the EIS or other permit approvals. The CIC will monitor and oversee implementation of the POD on all BLM-administered lands, as described in Appendix A6 – Environmental Compliance Management Plan of this POD.

1.4 ORGANIZATION OF THE PLAN OF DEVELOPMENT

The POD is organized into two major volumes. Volume I contains chapters 1 through 6 and the appendices. Volume II includes engineering, mitigation, and environmental mapping, which support information presented in Volume I. Following is an overview of the information contained in these two volumes.

1.4.1 Volume I

Volume I of the POD is intended to provide the reader with a general overview of the Project and key elements of the POD (chapters 1–6) and detailed information regarding the required PCEMs, protocols, and procedures for the construction, operation, and maintenance of the transmission line and ancillary facilities (appendices). While chapters 1 through 6 provide general information, the appendices (along with the mapping materials in Volume II) are more detailed and have been designed to serve as stand-alone documents that may be readily updated and refined. Following is an outline summary of the information and materials presented in chapters 1 through 6 and the appendices of this POD.

Chapters 1 through 6 include the following information:

Table 8. Environmental Protection Measures by Resource

PCM	Agency	Feature by Resource	Preconstruction	Construction	Operation and Maintenance	Decommissioning
Standard Mitigation						
X		The boundaries of construction activities will be predetermined and staked or flagged prior to any construction activity. No permanent markings will be applied to rocks or vegetation.	X			
X		Prior to construction, all construction personnel will be instructed on the protection of cultural and ecological resources.	X			
X		All vehicle movement will be restricted to designated access, contracted acquired access, or public roads.	X	X	X	X
X		To limit disturbance, existing access roads will be used to the extent practicable, provided that doing so does not additionally impact resource values. Widening and grading of roads will be kept to the minimum required for access by Project construction equipment.	X	X	X	X
X		Structures and/or ground wire will be marked with high-visibility devices such as aerial marker balls, where required by government agencies such as the FAA.	X	X	X	X
X		Transmission line materials will be designed and tested to minimize audible noise, radio interference, electromagnetic interference (EMI), and television interference due to corona.	X	X	X	X
X		No widening or upgrading of existing roads will be undertaken in the area of construction and operations, except for repairs or modifications to make roads safely passable, where soils and vegetation are sensitive to disturbance, in areas of critical habitat for vegetation or wildlife, in areas of habitat for BLM special status species, or where such activities could harm historic properties.	X	X	X	X
X		During operation of the transmission lines, the ROW will be maintained free of non-flammable debris. Desert vegetation will be crushed in places to promote seedling and revegetation, and reduce erosion potential.	X			
X	BLM and Western road construction specifications	BLM and Western road construction specifications will be followed where unimproved spur roads cannot be employed.	X	X	X	X
X		Unimproved spur roads will be used to the extent practicable in areas where no grading will be warranted to access work areas, within the approved ROW, restricted to designated access, even if that is unimproved access. Vegetation will be crushed where feasible, not cut. For all access types, soil will be compacted, but not removed, except when grading requires displacement of surface soil.	X	X	X	X
X		Where new roads will be required, water bars and/or rolling dip cross-drains will be utilized to minimize erosion. Details of their use will be documented in the SWPPP.	X	X	X	X
X		Structures will be placed to avoid, and/or to allow conductors to span, sensitive features such as riparian areas, waterways, roads, trails, and cultural sites within the limits of standard transmission line structure design. This will minimize the amount of sensitive features disturbed and/or reduce visual contrast.	X	X	X	X
X		Clearing of trees in and adjacent to the ROW will be minimized to the extent practicable to satisfy conductor-clearance requirements (NEC and up to 10 years' timber growth). Trees and other vegetation will be selectively removed to blend the edge of the ROW into adjacent vegetation patterns, as appropriate.	X	X	X	X
X		Separation between transmission lines and existing utilities, roads, and railroads will be minimized to the extent practicable. Opportunities to share portions of adjacent ROW's will also be explored.	X			
X		All construction vehicle movement will be restricted to predesignated access, contractor-acquired access, and public roads.	X			
X		The width of construction and new temporary access roads will be sited to keep to the minimum needed to avoid sensitive areas and to limit ground disturbance.	X			
X		Surface elevations will be returned to approximate pre-Project conditions, as practicable.	X			
WLD-1		A Worker Environmental Awareness Program (WEAP) will be prepared. All construction crews and field contractors will be required to participate in WEAP training prior to starting work on the Project. The WEAP training will include instructions for crews to report any issues, a review of the special status species; WUS; riparian habitat; cultural, paleontological, and other sensitive resources that could be impacted by the proposed Project; the locations of sensitive biological resources and their legal status and protections; and measures to be implemented for avoidance of these sensitive resources. A record of all trained personnel will be maintained during the construction period.	X	X	X	X
X		The process by which the BLM, Western, and Southern and its construction contractor will conduct environmental monitoring, compliance, and reporting activities during construction will be described in a Project compliance plan that will be prepared by the CIC after the CIC has been selected and reviewed by BLM. After issuance of this notice to proceed, a CIC, designated by the BLM and Western, will provide environmental oversight and compliance monitoring on BLM-managed lands during Project construction to ensure compliance with all design features and mitigation measures.	X	X	X	X

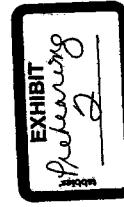


Table 8. Environmental Protection Measures by Resource (Continued)

PCM	Agency	Feature by Resource	Preconstruction	Construction	Operation and Maintenance	Decommissioning
Reclamation						
X		A Reclamation, Vegetation, and Monitoring Plan will be developed and implemented.		X	X	X
X		Reclamation will be accomplished with native species unless otherwise approved.		X	X	X
X		Seeding will occur between November and March to ensure a greater chance of success. This will be tied to replacement of conserved topsoil with its natural seed stock.		X	X	X
Air Quality and Climate Change						
X		Project activities will be in compliance with all applicable Federal, State, and local laws and regulations concerning prevention and control of air pollution during construction and operation.		X	X	
X		An Erosion, Dust Control, and Air Quality Plan will be prepared as part of the final POD. The plan will be developed and implemented to minimize and mitigate potential air quality and climate change impacts. The Erosion, Dust Control, and Air Quality Plan will include a section detailing its Construction Emissions Mitigation Plan (CEMP). See Appendix A-5 of this POD for an outline of the information in the Erosion, Dust Control, and Air Quality Plan, including the CEMP.		X	X	X
X		All necessary air quality permits will be obtained prior to construction or operating equipment that will result in regulated atmospheric or fugitive dust emissions.		X		
X		Trackout control devices such as grizzly bars, wheel washers, gravel pads, etc. will be located at all entrances and exits.		X		
X		Where implementation of these measures will have a meaningful impact on air quality, haul-truck cargo beds will be covered with tarps and travel speeds will be limited to no more than 15 miles per hour (mph) on unpaved roads.		X		
X		Combustion emissions from mobile sources will be minimized by proper maintenance of equipment.		X	X	
AIR-1		Dust control measures consistent with all applicable State or local standards, as outlined in the Erosion, Dust Control, and Air Quality Plan, will be implemented; these include the following measurable precautions: (1) frequent watering (no new water sources developed), stabilization or covering (as appropriate) of excavations, spoils, access roads, storage piles, and other sources of fugitive dust (parking areas, staging areas, etc.) if construction activity causes visible emissions of fugitive dust beyond the work area; (2) reduction in the amount of disturbed areas, where possible; (3) planting of vegetative ground covers, as appropriate, in disturbed areas after construction activities have ended; and/or (4) treatment of actively disturbed areas with DJM-approved dust palliatives.		X		
AIR-2		To reduce the potential for greenhouse gas emissions, only properly trained Project personnel will handle sulfur hexafluoride, and a sulfur hexafluoride recovery and recycling program will be implemented.		X	X	X
Cultural Resources						
X		Cultural resources will continue to be considered during post-EIS phases of work. Specific cultural resource inventory, protection, and mitigation measures to be employed will be outlined in the Project-specific PA, in accordance with Section 06 of the NEPA. The final POD will include the signed PA and the HPTP.		X	X	X
X		A Native American Graves Protection and Repatriation Act (NAGPRA) Plan of Action will be developed to outline the procedures to be followed in the event that human remains are encountered during ground disturbance. The NAGPRA Plan of Action will be applicable to discoveries of human remains on Federal lands and tribal land, and comparable with State laws from Arizona and New Mexico, which protect human remains with each tribe that may claim cultural affiliation to those remains discovered.		X	X	X
CR-1	X	The area of potential effects will be defined in the PA and will consist of the approved alternative corridor and appropriate buffers; all areas and ancillary features that will sustain ground disturbance (access roads, construction yards, etc.) will be subjected to a Class III, 100 percent-coverage pedestrian inventory for a Class III Intensive Field Survey (BLM 2004).		X		
CR-2		Before construction, and as described in the WEPAP, Soutihline and its construction contractor will provide cultural resources sensitivity training to all construction personnel so that Project personnel understand the procedures in the monitoring and discovery portion of the HPTP.		X	X	
CR-3		An HPTP will be developed and implemented to avoid, minimize, and mitigate the adverse effects of the Project on historic properties. Mitigation measures may range from avoidance and preservation in place to data recovery excavations conducted before the destruction of a site if avoidance is not feasible. The HPTP will include a Monitoring and Discovery Plan detailing procedures to be followed in the inadvertent discovery of a potentially significant archaeological site or human remains.		X	X	X
CR-4		Ground-disturbing activities and other proposed Project components will be sited to avoid or minimize direct impacts on cultural resources listed as, or potentially eligible for listing as, unique archaeological sites, historical resources, or historic properties.		X	X	X
CR-5		Establish and maintain a protective buffer zone around each recorded archaeological site within or immediately adjacent to the RCW that will be treated as an "environmentally sensitive area" within which construction activities and personnel are not permitted.		X	X	

Table 8. Environmental Protection Measures by Resource (Continued)

PCM	Agency	Feature by Resource	Preconstruction	Construction	Operation and Maintenance	Decommissioning
CR-6		Evaluate the significance of archaeological resources, buildings, and structures in the area of potential effects in terms of their eligibility for inclusion in the NRHP.	X			
CR-7		Activities will minimize ground surface disturbance within the bounds of significant archaeological sites, historical resources, or historic properties.	X	X		
CR-8		During construction, it is possible that previously unknown archaeological or other cultural resources or human remains could be discovered. Prior to construction, the Proponent will prepare a Construction Monitoring and Unanticipated Cultural Resources Discovery Plan to be implemented if an unanticipated discovery is made.		X		
Hazardous Materials and Waste						
X		Framework Plans prepared as part of the final POD will be developed and implemented to minimize and mitigate potential hazardous materials and waste; plans include SWPPP, SPCC Plan, Soil Management Plan, and HWP. These plans will include requirements by the EPA, OSHA, Arizona Department of Environmental Quality, and the New Mexico and Arizona Departments of Transportation.	X	X	X	X
X		The SWPPP will include BMPs to address the storage and handling of hazardous materials and sediment runoff during construction activities to minimize the risk of an accidental release. The SWPPP is required by, and enforced by, the EPA in New Mexico, and the Arizona Department of Environmental Quality in Arizona.	X	X	X	X
X		Construction, operation, and maintenance crew members who handle oil or other hazardous substances described in the SPCC Plan will be properly trained to deal with a spill and appropriate spill response or containment material will be available for use at applicable work sites. Careful handling and designation of specific equipment repair and tool storage areas, as outlined in the SPCC Plan, will reduce its potential for oil and fuel spills. In the event that there is an oil or fuel spill, immediate measures will be taken to control the spill, and the BLM, National Response Center, and/or Arizona Department of Environmental Quality or New Mexico Environment Department will be notified as defined in the SPCC Plan.	X	X	X	X
X		Personnel, contractors, and transporters involved with hazardous materials management will be required to comply with Federal and State regulations established for the transportation, storage, handling, and disposal of hazardous substances, materials, and wastes. "Hazardous substances" means any substance, pollutant, or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.		X	X	X
HAZ-1		The Project-specific HMMP and program will outline proper hazardous materials usage, storage, and transport requirements and applicable handling procedures. EPA Procedures for Handling and Storage of Hazardous Materials, OSHA requirements for proper storage and labeling on the job site, and New Mexico and Arizona Department of Transportation requirements for transportation of hazardous materials will be followed.	X	X	X	X
HAZ-2		If backfill material to be used is derived from on site that could possibly have contamination, it will be sampled and determined to be free of regulated contaminants before it is used to fill excavations. The results of any test soils should be shared with the appropriate surface managing agency. No contaminated soils will be used as fill material for the Project.		X		
HAZ-3		New or expanded substitution locations that involve the purchase or long-term leasing of land, purchased tenancies-in-common, and any other property to be acquired will be screened for environmental liabilities. The degree and level of screening will be based on knowledge of information available on the property to determine the probability of contamination or concern or other environmental impairment. A Phase I Environmental Site Assessment will be conducted if preliminary screening indicates a reasonable risk that such environmental conditions may exist on the property and the property continues to be targeted for acquisition by the Project, consistent with American Society for Testing and Materials Standard E1921-13.	X			
HAZ-4		The Soil Management Plan will provide guidance for the proper handling, onsite management, and disposal of contaminated soil. If encountered during construction, operation, and maintenance activities, appropriately trained personnel will be onsite during preparation, grading, and related earthwork activities to monitor the soil conditions encountered.	X	X	X	X
HAZ-5		In the event of a spill, workers in the immediate area will cease work, begin spill cleanup operations, and notify appropriate agencies as required by law and specified in the SPCC Plan. Soutline and its construction contractor(s) are responsible for cleanup and assume liability for any and all releases of hazardous substances disposed on public land, in accordance with State, Federal, and local laws and regulations. Soutline will immediately notify the BLM authorized officer or any and all releases of hazardous substances on public land.	X	X	X	X
HAZ-6		All construction and demolition waste, including trash and litter, garbage, and other solid waste will be removed and transported to an appropriately permitted recycling or disposal facility. Soutline and its construction contractor will prepare a Construction Waste Disposal Plan for all nonhazardous wastes generated during construction of the Project. The plan will contain a description of all nonhazardous solid and liquid construction wastes, recycling plants, and waste management methods to be used for each type of waste.		X		X
HAZ-7		Southern or the applicable contractors will maintain all vehicles in good working order. Equipment will be properly tuned and maintained to avoid leaks of fluids.	X	X	X	X
HAZ-8		Service and refueling procedures will not be conducted within 500 feet of a seep, wash, or other water body. Routine service of any vehicles or equipment will not be done within the ROW.	X	X	X	X

Table 8. Environmental Protection Measures by Resource (Continued)

PCM	Agency	Feature by Resource	Preconstruction	Construction	Operation and Maintenance	Decommissioning
Health and Human Safety						
HEA-1 HEA-3		The HASP and Fire Protection Plan prepared as part of the Final POD will be developed and implemented to minimize and mitigate potential health and human safety impacts. Southline and its contractors will work with the appropriate surface-managing agencies to incorporate any site restrictions that are put into effect during construction, operation, and decommissioning of the Project.	X	X	X	X
HEA-2		Southline and its construction contractor will locate overhead and underground utilities that may reasonably be expected to be encountered during construction. If a utility service interruption is known to be unavoidable, Southline and its construction contractor will coordinate with the service providers to notify members of the public, the jurisdiction, and the service providers affected via the interruption via letters and newspapers notices published no later than 7 days prior to the first interruption. Copies of the notices will be provided to the BLM and Western following notification.	X	X		
HEA-4		All permanent metallic objects within the Project's transmission line ROWs will be grounded in accordance with industry standards.	X	X	X	
		Southline and its construction contractor will provide a safety representative at all times with the construction crews, first aid kits stored in each construction vehicle, a worker trained in first aid included in each work group during construction, and the development and implementation of a HASP.		X		
		The HASP will address potential situations that workers could encounter during construction and maintenance. The purpose and goal of the worker safety and environmental training will be to communicate project-related environmental and safety concerns and appropriate work practices to all field and construction personnel prior to the start of construction, including spill prevention, emergency response measures, accident prevention, use of protective equipment, medical care of injured employees, safety education, and fire protection. Training will encompass environmental training related to road designations and speed limits, promote "good neighbor" policies, and institute BMPs for construction. The training will emphasize site-specific physical conditions to improve hazard prevention in accordance with OSHA requirements (29 CFR 1910 and/or 1926, as applicable).	X	X	X	X
Land Use		Although disturbance to Pitme County Conservation Lands will primarily occur within the existing Western ROW for the existing line, every effort will be made to minimize and avoid impacts to these lands (such as Bar V Ranch, Tumamoc Hill, etc.), to the extent practicable.			X	X
Farmlands and Rangeland						
FARM-1	X	Fences and gates will be repaired or replaced to their original, predisturbed condition (or better), as required by the landowner; BLM Authorized Officer, or other land manager entity if they are damaged or destroyed by construction activities. New temporary and/or permanent gates will be installed only with the permission of the landowner or the BLM. Temporary gates not required for post-construction access control will be removed following construction completion and in accordance with the POD.	X		X	
	X	Water facilities (e.g., tanks, developed springs, water lines, wells, etc.) will be repaired or replaced to their predisturbed condition if they are damaged or provided for wildlife and livestock until permanent repair or replacement is complete.			X	X
	X	Laydown areas and subsidence development will be located on previously disturbed land, where possible, to reduce the impact to farm operations and production in active farmlands. If laydown areas cannot avoid farmlands, Southline will receive approval from the landowner of the farmland to lease the land required for the laydown area.		X	X	
	X	Temporary gates will be installed to prevent livestock from escaping rangelands and accessing roadways. Fences and gates will be repaired or replaced to their original, predisturbed condition, as required by the landowner or the BLM Authorized Officer if they are damaged or destroyed by construction activities. Cattle gates will be installed at access points to prevent livestock from exiting unsecured gates onto roadways.		X	X	
	X	On agricultural land, ROWs will be aligned. In so far as practicable, to reduce the impact to farm operations and agricultural production. This will typically be done in conjunction with negotiating ROW agreements with landowners.		X	X	
Geology and Minerals						
GEO-1		Southline will prepare a geotechnical engineering study prior to the final project design to identify site-specific geological conditions and potential geological hazards. The data collected from the study will be used to guide sound engineering practices and mitigate potential geological hazards.		X		

Table 8. Environmental Protection Measures by Resource (Continued)

PCM	Agency	Feature by Resource	Preconstruction	Construction	Operation and Maintenance	Decommissioning
Military Operations						
DOD-1	X	The transmission line operator will work with Buffalo Soldier Electronic Testing Range (BSSTR) to coordinate and possibly limit interconnections to the upgraded Tucson-Apache 230-kV transmission line to the extent allowed by Western's Open Access Transmission Service Tariff and Federal Energy Regulatory Commission (FERC) Orders. The transmission line operator will work with interconnection applicants to locate any future interconnection points on Western's upgraded Tucson-Apache 230-kV transmission line outside the BSSTR and within 1 mile of its boundaries. New transmission facilities are defined to include substations, switchyards, and converter stations.	X			
		Western's Open Access Transmission Service Tariff and the Federal Power Act, as amended, provide the framework, in accordance with Federal law, to consider interconnection requests. Western's Tariff substantially conforms with FERC Orders 888, 889, 890, 2003, and 2006, and ensures open access to Western's transmission system on an equal footing with regulated utilities.				
DOD-2	X	Southline and Western will work with BSSTR to identify micro-siting opportunities during Project design.	X			
DOD-3	X	The transmission line operator will coordinate with BSSTR during the design phase of the proposed Project to limit EMI. The proposed Project will be constructed using the best available construction techniques and technology (i.e., use of grounding, selective conductor type and arrangement, and conductor surface gradients), to the extent feasible and reasonably economical, in order to minimize EMI.	X			
DOD-4	X	The transmission line operator will coordinate with BSSTR to allow for an updated measure of the "floor value" of the proposed Project over the first 6 months of operation once the proposed line is energized. Such cooperation could include provision of real-time operating and load information to BSSTR to help calculate the floor value of EMI.	X	X	X	X
DOD-5	X	The transmission line operator will coordinate with BSSTR to develop reporting standards, for potential intrusion in the transmission line maintenance and inspection program, to the extent allowable by FERC and NERC reliability standards. While normal inspection maintenance will take care of typical EMI issues, specific incidents such as storm damage or vandalism will need to be responded to by the operator outside of the normal maintenance cycle, if not detectable through transmission line monitoring, the operator will need to hear from someone experiencing interference in order to respond.	X	X	X	X
DOD-6	X	The transmission line operator will coordinate planned outages (curtailment of power line operations for BSSTR to implement testing) with BSSTR to the extent feasible in order to meet necessary contractual commitments, utility mandates, laws and regulations, and power system requirements. The operator is very limited in the timing and duration of potential outages; outages stress the rest of the system, which can cause system failures.	X			
X		Use the optional structure height of 90 feet in areas intersecting 200 feet in height in areas intersecting MTRs VR-263, VR-264, and VR-1233. Towers crossing the MTRs should also have anti-collision lighting to the maximum extent possible. In order to make the hazard of transmission lines more apparent to pilots flying low altitude at night, these measures will mitigate impacts to military training and airspace usage, as well as contribute to the safe conduct of missions.	X	X	X	X
X		Chart the transmission lines before they are erected.	X			
X		Identify transmission structures with high-visibility markers in areas where they intersect or parallel MTRs.	X	X	X	X
MIL-1		The appropriate military scheduler(s) and U.S. Border Patrol representative(s) will be contacted to schedule airspace usage for any construction or maintenance activity on lands that could be used by the military and/or U.S. Border Patrol for training activities or other flights. Coordination will occur with the applicable scheduling office to schedule necessary airspace usage prior to maintenance activities.	X	X	X	X
MIL-2		The proposed Project will comply with FAA regulations, including lighting regulations, to avoid potential safety issues associated with proximity to airports, military bases or training areas, or landing strips.	X	X	X	X
Noise						
	X	Schedule construction activities and route construction traffic to minimize disruption to nearby residents and existing operations surrounding the Project.			X	
	X	Noisy construction activities (including blasting) should be limited to the least noise-sensitive times of day (daytime only between 7 a.m. and 10 p.m.) and to weekdays. In sensitive wildlife areas, they should be limited to between 1–5 hours after sunrise and 1.5 hours before sunset.			X	
	X	If warranted, in extreme circumstances, erect temporary wooden noise barriers around areas where construction equipment will disturb sensitive receptors ¹ near substations. Barriers may reduce noise by 3 to 10 dBA (EPA 1971).			X	
	X	To the extent possible, locate noisy equipment away from sensitive receptors.			X	
	X	Wherever feasible, schedule noise-generating activities to occur at the same time, since additional sources of noise generally do not add noise. That is, less-frequent noise activities will be less annoying than frequent less-noisy activities.			X	
	X	If blasting or other activities that cause loud bursts of noise are required during the construction period, nearby residents will be notified in advance.			X	

¹ As identified in the EIS, noise sensitive receptors include residential areas, schools and day care facilities, hospitals, long-term care facilities, places of worship, libraries, parks, and recreational areas specifically known for their solitude and tranquility (such as wilderness areas).

Table 8. Environmental Protection Measures by Resource (Continued)

PCM	Agency	Feature by Resource	Preconstruction	Construction	Operation and Maintenance	Decommissioning
NOI-1	X	If possible, minimize trips for surveillance and monitoring of Project transmission lines.			X	
		Construction will comply with local noise ordinances. There may be a need to work outside the local ordinances to perform work during available line outage windows. In order to take advantage of low electrical draw periods during nighttime hours, the construction contractor will comply with variance procedures required by local authorities.	X		X	
NOI-2		Construction equipment will be maintained in good working order in accordance with manufacturer's recommendations.	X		X	X
NOI-3		Idling of construction equipment and vehicles will be minimized during construction.	X		X	
NOI-4		Workers will be provided with appropriate hearing protection, if necessary, as described in the HASP.	X	X	X	X
Paleontology	X	The Project will avoid Potential Fossil Yield Classification (PFYC) 1 and 4 geological units where possible by spanning resource areas.	X			
PAL-1	X	In consultation with the appropriate land management agencies, Soutihline and its contractor will develop a Paleontological Monitoring Plan to address paleontological resources within the Project area. This plan will address personnel education, predisruption surveys, monitoring of ground disturbance, and the deposition and curation of fossils in a qualified repository.	X	X	X	
PAL-2		If scientifically significant fossils are encountered during construction, construction activities will be temporarily diverted away from the discovery and the authorized officer of the BLM will be notified. BLM will then implement the appropriate measures to avoid, protect, and/or recover the fossil remains.	X			
Recreation		Soutihline will not site additional workspace areas, such as contractor yards, in recreation areas in order to minimize impacts on recreational users during construction.	X	X	X	X
REC-1		Soutihline and its contractor will coordinate with the BLM to display appropriate "close" signage at the entrance to new spur roads to structure locations and access roads located on BLM managed lands. This includes temporary signs during the construction phase of the project and permanent signs and/or vehicle barriers that will close the spur routes to public travel during the operational phase. Signs will be removed as appropriate upon decommissioning.	X	X	X	X
REC-2		If temporary short-term closures to recreation areas are necessary for construction activities, Soutihline and its contractor will coordinate those closures with recreation facility owners. To the extent practicable, Soutihline and its construction contractor will schedule construction activities to avoid heavy recreational use periods (e.g., holidays or tournaments). Soutihline and its construction contractor will coordinate with the facility owner to post notice of the planned closure onsite 14 calendar days prior to the closure.	X	X	X	X
REC-3		Construction will be limited to certain areas of the ROW during specified hunting seasons (e.g., big game hunting seasons) by sequencing construction activities along the ROW, in coordination with New Mexico Department of Game and Fish (NMDFG) and AGFD. In accordance with each agency's hunting regulations, such coordination will allow the agencies to notify hunters of potential T-line construction activities to affect their hunt. Where construction cannot avoid hunting seasons (e.g., mountain lion, "varmint," and other species with year-round hunting seasons), hunters will be required to avoid discharging firearms adjacent to the construction areas, in accordance with NMDFG and AGFD hunting regulations.	X	X	X	X
		If the Arizona National Scenic Trail must be temporarily closed during construction, an alternate trail route (detour) will be provided during the closure, if it is necessary for trail users to leave the trail during the temporary closure. Trail users will need to obtain permission from the Arizona State Land Department.	X	X	X	X
Wilderness	X	Notify Wilderness Inventory Unit users by publication of the construction schedule in local media, posting the schedule at administering agency offices, posting the schedule at trailheads or other recreation access points to Wilderness Inventory Units, or other means of reaching visitors. This notification process will alert wilderness users to the potential temporary impacts of presence and sound of construction on opportunities for experiences of solitude and primitive recreation settings, and allow visitors to decide whether they want to reschedule their visit.	X	X	X	X
Trails	X	In accordance with the "Design Features and Best Management Practices for National Trails and Associated Resources" (see Appendix 1 in Manual 6250 [BLM 2012d]), proposed projects within a National Trail Management Corridor will be designed and located in a manner that is compatible with trail purposes.	X	X	X	X
		Minimize visual contrast of Project through use of Project design such as using low profile buildings, siting using the natural topography to hide or screen development, reducing the aerial extent of impact by clustering developments, using vegetative screening, mimicking the line, form, and texture of the surrounding landscape; painting infrastructure, using colors that camouflage the development and prevent glare; and other techniques developed to address the site-specific conditions (BLM 2012d).	X	X	X	X
		Avoid the use of dye, restrict administrative vehicle travel off of designated routes to minimize spread of exotic and invasive species with the National Trail Management Corridor, and consider alternative treatment methods such as use of backpack sprayer (BLM 2012d).	X	X	X	

Table 8. Environmental Protection Measures by Resource (Continued)

PCM	Agency	Feature by Resource	Preconstruction	Construction	Operation and Maintenance	Decommissioning
Soils						
SOI-L-1		As appropriate and feasible, Southline and its construction contractor will implement topsoil segregation and conservation practices at substation sites and as directed by the BLM and Western.		X	X	
	X	In construction areas (e.g., temporary use areas, structure sites, access roads, etc.) where grading is required, surface restoration will be implemented as required by the landowner or BLM authorized officer. The method of restoration will normally consist of returning disturbed areas back to normal contour, installing cross drains or erosion control, placing water bars in the road, and/or filling ditches. The Reclamation, Vegetation, and Monitoring Plan will include final details on the details of restoration.		X	X	
Socioeconomics						
	X	Southline should maximize local hiring, to the extent feasible, during construction. Local hiring could both maximize local economic benefits from the proposed Project, and help reduce potential housing issues and new public service demands.	X	X	X	
	X	Southline will develop plans for housing the temporary construction workforce during the periods of time when construction will focus on the western portions of the New Build Section (e.g., Hidalgo County) and the eastern portion (e.g., northeast Cochise County). If the Proposed Alternative is selected, housing planning should also include southern Luna County. The plan should be developed with input and review from local authorities in those areas to both minimize potential impacts on housing and public services, and inform the communities of potential challenges associated with construction.	X	X	X	
Transportation						
TRA-1		Prior to the start of construction, Southline and its construction contractor will prepare a Traffic and Transportation Management Plan for the Project to address the timing and routing of Project trips in an effort to minimize Project impacts on local streets, highways, and railroad operations.	X			
TRA-2		At least 90 days prior to any construction-related helicopter use on the Project, Southline and its construction contractor will coordinate with the FAA for review and approval of plans for any construction-related helicopter flights that will take place during construction and operation. Southline and its construction contractor will then provide information to the BLM and Western regarding the intended need and use of helicopters during construction and operation of the Project, including the Flight and Safety Plan; the estimated number of days and hours that the helicopter will operate; the type and number of helicopters that will be used; the location, size, and number of staging areas for helicopter takeoffs and landings; and written approval from property owners for use of helicopter staging areas.	X	X	X	X
	X	If any existing roads were to be damaged by Southline or its construction contractor during construction activities and/or truck traffic, the road will be repaired.			X	
	X	In order to mitigate traffic impacts on primary roads in metropolitan areas, shift changes for construction crews will not occur during the peak hours for the road during construction. Overize or overwidth vehicle movements will be planned for nighttime hours, where practical and not detrimental to safety or evening residential noise levels, or those specified in permitting regulations in order to minimize traffic disruptions.	X	X	X	
	X	In order to reduce public access to BLM roads and adjacent lands that are not currently accessible by the public, the Proponent will fence off or place restricted access signage at new access roads, where appropriate.	X	X	X	X
	X	Throughout the permitting and design phase, the Proponent will correspond with Federal, State, and local transportation agencies in order to ensure that the FAA criteria for inconsistencies with current and future transportation plans.		X		
	X	Throughout the permitting and design phase, the Proponent will correspond with Federal, State, and local airports in order to avoid Project structures near airports are met, and to avoid Project inconsistencies with identified airport plans.	X		X	
	X	Identify transmission structures with high-visibility markers in areas where they intersect or parallel MTRs.			X	
Vegetation						
VEG-1	X	Provide gates and fencing in areas where OHV use will be restricted due to military operations, or to protect sensitive resources.		X	X	X
	X	Efforts will be made to minimize vegetation removal and permanent loss at construction sites to the extent practicable. Access will not be graded unless necessary for erosion control or other engineering reason. Final structure and spur road locations will be selected to avoid special status vegetation to the greatest extent feasible.			X	
VEG-2	X	Southline and its construction contractor have developed a Reclamation, Vegetation, and Monitoring Plan (Appendix B15) that will guide restoration and revegetation activities for all disturbed lands associated with construction of the Project and its eventual termination and decommissioning. The plan addresses all land disturbances, regardless of ownership, that has been developed in consultation with appropriate agencies and landowners and will be provided to these entities for review and input. The plan provides details on topsoil segregation and conservation, Vegetation treatment and removal, salvage of appropriate species, and revegetation methods, including use of native seed mixes, application rates, transplants, and criteria to monitor and evaluate revegetation success.	X	X	X	X
VEG-3	X	Special status plants, including the Prima pineapple cactus (<i>Coryphantha schiedii</i> or <i>robustissima</i>), will be avoided. Where avoidance is not possible, special status plants will be conserved by relocating plants and/or resowing, reflecting topsoil with existing topsoil that was removed, and regrading in compliance with local ordinances (Prima County, Tohono O'odham Nation). Measures to conserve special status plants will be implemented through the Reclamation, Vegetation, and Monitoring Plan.	X	X	X	X

Table 8. Environmental Protection Measures by Resource (Continued)

PCM	Agency	Feature by Resource	Preconstruction	Construction	Operation and Maintenance	Decommissioning
VEG-4	X	Removal of riparian scrubland vegetation will be avoided where possible. Natural regeneration of native plants will be supported by selectively cutting vegetation with hand tools, mowing, trimming, or using other removal methods that allow root systems to remain intact.		X	X	X
VEG-5	X	In consultation with local BLM field offices and local resource agencies, Southline and its construction contractor will develop and implement a Noxious Weed Management Plan.		X	X	X
VEG-6 (see also PPC-3 and 4)		As required, equipment will be cleaned before ingress to minimize the potential for the spread of invasive species. These details will be described in the Noxious Weed Management Plan. Buffelgrass (<i>Pennisetum ciliare</i>) will be specifically addressed in the plan, which will outline efforts to control it within areas disturbed by the proposed Project to ensure that it does not spread to adjoining lands.	X	X	X	X
	X	Preconstruction native plant inventories, including Chihuahua scrubpea, and surveys for noxious weed species as stipulated by the appropriate land management agency will be conducted once transmission line center line, access road, and transmission line structure sites have been located.	X			
	X	Although the 150-foot ROW across the San Xavier District of the Tohono O'odham Nation was surveyed for Pima pineapple cactus in summer 2014, additional preconstruction species-specific surveys for the Pima pineapple cactus will be conducted once transmission line center line, access road, and transmission line structure sites have been located, as needed.	X			
	X	Preconstruction coordination with Pima County, the University of Arizona, and other appropriate groups will be conducted to minimize impacts to Tumamoc globemaster (<i>Turmanica macrocalyx</i>) monitoring plots and plants on Tumamoc Hill. Measures to conserve this plant, as well as other special status plants, will be implemented through the Reclamation, Vegetation, and Monitoring Plan.	X	X	X	X
	X	In construction areas where grading is not required, vegetation will be left in place wherever feasible, and original contours will be maintained to avoid excessive root damage and allow for rerowth. All existing roads will be left in a condition that is equal to or better than their condition before the construction of the transmission lines, as determined by the appropriate land management agency.		X		
	X	Field presence/absence surveys will be conducted for special status species in locations where such species are likely to occur within the Project ROW and specifically locations where vegetation will be impacted, prior to any actual impacts. Surveys will be conducted following established protocols by qualified biologists approved by BLM.	X			
	X	Southline and its construction contractor will provide training to all appropriate field personnel working on the Project to identify noxious weeds and prevent spread. Training will discuss known invasive and noxious weed species, known locations, identification methods, and treatment protocols. Training materials and a list of Project personnel completing the course will be provided to the BLM and Western.		X		
	X	Invasive and noxious weed populations will be mapped and reported to BLM/Western. BLM and Western will determine which areas will necessitate vehicle washing, based on the results of the invasive/noxious weed surveys.	X	X	X	
	X	Noxious weeds and other exotic, invasive plant species will be inventoried by a qualified biocertist in the immediate proximity to any sensitive plant communities and any special status species populations. This noxious weed inventory will then provide information to supplement mitigation plans for sensitive plant communities and/or special status species habitats to prevent the expansion of any noxious weeds or other exotic invasive plant species into those locations. Mitigation planning shall be included as part of the Plant and Wildlife Species Conservation Measures Plan.	X			
	X	Southwest Regional Gap Analysis Project plant associations (communities) that are considered to be environmentally sensitive will be included in ground-truthing field surveys, such as wetlands, riparian areas, drainages, and special status species habitats, to confirm the presence and extent of such communities. If any such sensitive plant communities are identified and documented as part of the plant and wildlife species conservation measures plan, mitigation measures will be developed as part of the plant and wildlife species conservation measures plan to meet BLM requirements and approval. The compensation plan will include calculations of compensation ratios and mitigation acreages for special status plant species requiring additional mitigation. Compensatory mitigation could include payment of an in-lieu fee, acquiring mitigation land or conservation easements, or a combination of the two.	X			
PPC-1		For Pima pineapple cactus that cannot be avoided, Southline will purchase credits in a U.S. Fish and Wildlife Service (FWS)-approved conservation bank for suitable mitigation lands within Pima County's Pima pineapple cactus habitat. Alternatively, Southline may purchase		X		
PPC-2		In compliance with Executive Order 13112 regarding invasive species, all disturbed soils that will not be landscaped or otherwise permanently stabilized by construction shall be seeded using species native to the Project vicinity.		X		
PPC-3		Also in compliance with Executive Order 13112 regarding invasive species, all earthmoving and hauling equipment shall be washed at the contractor's storage facility prior to arriving onsite to prevent the introduction of invasive species.		X		

Table 8. Environmental Protection Measures by Resource (Continued)

PCM	Agency	Feature by Resource	Preconstruction	Construction	Operation and Maintenance	Decommissioning
PPC-4		To prevent invasive species propagules from leaving the site, the contractor shall inspect all construction equipment and remove all attached plant/vegetation and soil/mud debris identified prior to leaving the construction site.			X	
PPC-5		Any Prima pineapple cactus that are not within the area of permanent disturbance, but are present within the Project vicinity, shall be flagged by a qualified biologist prior to the commencement of work to avoid accidental damage during construction. Flagging will be removed following construction. Flagging will consist of flagging the area around the Prima pineapple cactus, not flagging the plant itself, and signage will label it as an "Environmentally Sensitive Area". Flagging will be removed following construction.	X	X	X	
PPC-6		Any Prima pineapple cactus that cannot be avoided will be conserved by relocating plants within the existing ROW, but outside of the area of any ongoing disturbance.	X	X	X	
BO-CM (Biological Opinion-Conservation Measures)	BLM and Western	BLM and Western will coordinate with the Arizona-Sonoran Desert Museum in salvaging for the museum's collection if individual Prima pineapple cactus cannot be relocated for some reason.	X	X	X	
		Pre-construction surveys for Chihuahua scrubland and other special status plant species will occur in suitable habitat and ground disturbance in occupied habitat will be avoided to the extent practicable. FWS shall be contacted prior to disturbance if an Chihuahua scrubland are located.	X	X	X	
X		Prickly Russian thistle (<i>Salsola tragus</i>), Sahara mustard (<i>Brassica tournefortii</i>), and fountain grass (<i>Pennisetum setaceum</i>) are not identified as noxious weeds in Arizona. However, if these species are present in the ROW and not present in adjacent areas, then measures will be taken to treat these invasive species in the ROW.				
X		If noxious weed species on the 2005 list, which currently have small and limited distributions in the state and/or are identified as "alert" species in AZ-WPIC are identified in and/or adjacent to the ROW, the BLM/outline will attempt to coordinate with the adjacent landowner to treat and eradicate, if possible, these uncommon noxious weeds.				
		The responsible Project operator will comply with agency requirements regarding management of noxious weeds within the ROW, along access roads, and at temporary use areas; (e.g., cleaning equipment to prevent spread of noxious weeds). Chemical treatment within or adjacent to the ROW generally would be limited only to areas with noxious weeds, and only if absolutely necessary.				
Visual Resources						
VIS-1		In order to restore disturbed areas to an appearance that will blend back into the overall landscape, seed mix will be tailored to an area's soil type, existing vegetation, and native species.			X	X
VIS-2	X	The alignment of any new access roads (including unimproved spur roads) will stay within the designated access ROW and will follow the designated area's tandem contours and avoid steep areas as much as feasible, provided that such alignment does not additionally impact resource values. This will minimize ground disturbance and/or reduce scarring (visual contrast).	X	X	X	
VIS-3		During the construction period, dust suppression measures will be used to minimize the creation of dust clouds potentially associated with the use of access roads.			X	
VIS-4	X	The Project will incorporate nonspecular conductors into the Project design to decrease reflectivity and visibility of Project features. Non-transmission line structures, such as operators' and maintenance buildings, microwave equipment buildings, regeneration structures, emergency generators, and other associated structures will be treated or painted with non-reflective, flat-toned surface treatment. The color of the structures will be painted BLM Environmental Color Chart "Shadow Gray", unless otherwise directed by the authorized officer based on a field evaluation of color choices that will demonstrate better measurable performance over Shadow Gray. BLM Visual Resource Management staff shall be consulted and shall approve color selection relative to site-specific structures to be painted.	X	X	X	
X		All lattice towers shall be "dullied" non-specular metal and monopoles, property color treated (BLM Environmental Color Chart "Shadow Gray"). Aerial markers or warning lights will be installed on conductors or structures if required by FAA, U. S. Customs and Border Protection, and DOD regulations for structures over 130 feet. The use of red strobe lighting will reduce potential impacts from artificial night lighting and will reduce impacts from night brightness (FAA Advisory Circular 707460-1K (FAA-2007)). Exterior lights installed on conductors or other facilities will be aviation warning lights, or FAA L-864 aviation red-colored flashing lights with 20 to 40 flashes per minute standard flashing range.	X	X	X	
X		The alignment of new access roads of cross-country routes will follow the landform contours where practicable to minimize ground disturbance and reduce visual scarring of the landscape, provided that the alignment does not affect other resource values.	X	X	X	
X		Clearing of trees in and adjacent to the ROW will be minimized to reduce visual contrast to the extent practicable to satisfy conductor-clearance requirements. Trees and other vegetation will be removed selectively to blend the edge of the ROW and adjacent vegetation patterns, as practicable and appropriate.	X	X	X	
X		All new or improved access that will not be required for maintenance will be closed or rehabilitated to make it less visually apparent.	X	X	X	
X		Tower design may be modified, or an alternative tower type may be selected, to minimize visual contrast as appropriate (BLM 2013a).	X	X	X	
		Standard tower design will be modified to correspond to spacing of existing transmission structures, where feasible and within the limits of standard tower design to design, to reduce visual contrast (BLM 2013).	X	X	X	
X		At highway, canyon, and trail crossings, towers will be placed at the maximum feasible distance from the crossing within the limits of standard tower design to reduce visual impacts.	X	X	X	

Table 8. Environmental Protection Measures by Resource (Continued)

PCEM	Agency	Feature by Resource	Preconstruction	Construction	Operation and Maintenance	Decommissioning
Water Resources						
WAT-1		A Project-specific construction SWPPP will be prepared prior to the start of construction of the transmission line and substations in compliance with Clean Water Act (CWA) Section 402, if required. SWPPP will use BMPs to address the risk of an accidental release. As part of the SWPPP, soil disturbance at structure construction sites and access roads will be the minimum necessary for construction and to prevent long-term erosion. Activities such as restoration of disturbed soil, revegetation, and/or construction of permanent erosion control structures. A U.S. Army Corps of Engineers permit will be obtained prior to the start of construction of the transmission line and fill material in compliance with CWA Section 404, if required. Activities in and around streams and wetlands will be designed to avoid, minimize, and mitigate impacts to WUS.	X	X	X	
WAT-2		Construction equipment will be kept out of flowing stream channels, unless feasible alternatives are not available. Structures will be located to avoid active drainage channels, especially downstream of steep slope areas, to minimize the potential for damage by flash flooding and mud and debris flows.	X	X	X	X
WAT-3		Flood-control devices will be located where required to protect structures from flooding or erosion. Appropriate design of structure foundations will be used to prevent scour or inundation by a 100-year flood and to avoid disturbed areas. The locations of transmission structures will be designed to avoid steep, disturbed, or otherwise unstable slopes. If drainages cannot be avoided by structure placement, Southline and its construction contractor will design drainage crossings to accommodate estimated peak flows and ensure that natural volume capacity can be maintained throughout construction and upon post-construction restoration.	X	X	X	X
		Roads will be built as close as possible to right angles to the streams and washes. Culverts or temporary bridges will be installed where conditions warrant. All construction and operation activities shall be conducted in a manner that will minimize disturbance to vegetation, drainage channels, and intermittent or perennial stream banks.	X	X	X	X
		If a route is approved near the internal border, construction activities should be accomplished in a manner that does not change historic surface runoff characteristics at the international border. Copies of any hydrologic or hydraulic studies and site-specific drawings for work proposed in the vicinity of the International Boundary will be submitted to the U.S. International Boundary and Water Commission.	X	X	X	X
		To the extent practicable, structures will be sited with a minimum distance of 200 feet from streams.	X			
Wildlife						
WILD-2		In consultation with the BLM and Western, Southline and its construction contractor will prepare and implement a Construction Biological Monitoring Plan prior to issuance of a notice to proceed and prior to construction that will specify the level of biological monitoring to be provided throughout construction activities in all construction zones with the potential for presence of sensitive biological resources. The number of monitors and monitoring frequency will be specified for each work zone.	X	X	X	
WILD-3		Preconstruction surveys will be required in areas where Sonoran desert tortoise (new a separate species; <i>Morafka's desert tortoise</i> , (<i>Gopherus morafkai</i>)), and Gila monster (<i>Heloderma suspectum</i>) are expected to occur. In consultation with the BLM and Western, Southline and its construction contractor will hire qualified biologists to conduct preconstruction surveys in ground disturbance areas within suitable habitat for appropriate special status species.	X			
WILD-4		To reduce impacts on the Sonoran (Morafka's) desert tortoise, known to exist in the western portion of the project area, only authorized biologists with a valid AGFD permit will handle desert tortoises if encountered within the Project area, following the most current desert tortoise handling guidelines published by the AGFD.	X	X	X	
WILD-5		To reduce impacts on all species protected by the Migratory Bird Treaty Act (MBTA), (1) Southline and its construction contractor will conduct preconstruction surveys for active nests, and consult with the appropriate agencies (BLM, FWS, or AGFD) on a case-by-case basis when active nests are found in Project areas, unless directed to do otherwise by these same agencies; (2) a buffer will be placed around active bird nests, and nests will not be moved during breeding season; in compliance with the MBTA, unless the Project is expressly permitted to do so by the FWS or BLM, depending on the location of the nest; (3) all active nests and disturbance or harm to active nests will be reported to the FWS or BLM, upon detection; and (4) work will halt if it is determined that active nests will be disturbed by construction activities, until further direction or approval to work is obtained from the appropriate agencies.	X	X	X	
WILD-6		To reduce impacts on golden eagles and other raptors, Southline and its construction contractor will develop and implement an APP, in coordination with AGFD and the BLM and Western for approval. The plan will be prepared in accordance with guidance provided by the FWS and in consultation with best practices such as the "Reducing Avian Collisions with Power Lines" (APUC 2012).	X	X	X	X
WILD-7		Southline and its construction contractor will follow Pima County guidelines for surveys prior to disturbance located in Pima County for western burrowing owls (<i>Athene cunicularia</i>). Surveys for western burrowing owl will also be conducted in Cochise County near agricultural fields surrounding the Wilcox Playa, and anywhere else throughout the Project where suitable habitat occurs. Surveys for western burrowing owl in Arizona will follow the "Burrowing Owl Project Clearance Guidance for Landowners" (AGFD 2009). Surveys for western burrowing owl in New Mexico will follow the NMDFG "Guidelines and Recommendations for Burrowing Owl Surveys and Mitigation" (NMDFG 2007).	X	X	X	
WILD-8		Final structure and spur road locations will be adjusted to avoid sensitive wildlife resources to the greatest extent feasible.	X	X	X	X

Table 8. Environmental Protection Measures by Resource (Continued)

PCM	Agency	Feature by Resource	Preconstruction	Construction	Operation and Maintenance	Decommissioning
AGFD-1	X	Preconstruction surveys for non-game sensitive species such as ornate box turtle (<i>Terrapene ornata</i>), western burrowing owl (<i>Athene cunicularia</i>), Texas horned lizard (<i>Phrynosoma cornutum</i>), kit fox (<i>Vulpes macrotis</i>), etc. Timing of the surveys will be determined through consultation with AGFD and NMDFG.		X		
		Preconstruction surveys for species listed under the Endangered Species Act or specified by the appropriate land management agency as sensitive or of concern will be conducted in areas of known occurrences or suitable habitat. Timing of the surveys will be determined by FWS-approved, species-specific survey protocol.		X		
X		Monitoring of construction activities will be required in some areas to ensure that effects on these species are avoided during preconstruction surveys, seasonal restrictions on construction within a specified buffer will be implemented where applicable, according to FWS protocols, to comply with the Bald and Golden Eagle Protection Act. Preconstruction nesting-season surveys for migratory birds and surveys for burrowing owls in suitable habitat will be conducted as needed to comply with the MBSA.		X		
X		Surveys for bat roosts will be conducted within 0.25 mile of the Project ROW in areas that potentially contain caves, karst features, or mines. Occupied bat roosts will be avoided.	X	X		
X		Clearing, grubbing, blading, and access road improvements occurring within identified sensitive areas will be conducted outside the breeding season for most desert-Residing migratory birds.	X	X		
X		Construction holes left open overnight will be appropriately fenced or covered to prevent damage to wildlife or livestock. They will be inspected daily until filled to ensure no wildlife has become entrapped.	X	X		
X		Except where otherwise posted or allowed, a Project speed limit of 25 mph will be designated for all construction areas, spur roads, and new access roads to minimize the potential for construction equipment collisions with wildlife. In areas with mountainous terrain and/or poor site distances, the Project speed limit will be 15 mph.		X		
X		In construction areas where recontouring is not required, vegetation will be left in place wherever possible, to avoid excessive root damage and allow for regrowth.		X		
X		If designated suitable bighorn sheep (<i>Ovis canadensis</i>) habitat along subroute 12 in segment S2 were to become occupied by bighorn sheep, then no Project facilities except transmission lines will be built in that area, if that route is selected.		X		
X		To avoid impacting roosting bats at the Ira Road bridge, blasting activities will be restricted to less than 130 decibels (dB) if possible, and if that is not possible, then blasting activities will occur at night, after most bats have left their roost. No blasting will occur in April or May when the maternity colony is present.		X		
AGFD-2	X	Southline will fund the relocation of Crane Lake, including acquisition of land if necessary, construction of the lake and associated infrastructure, revegetation, and visitor facilities. This will include operation and maintenance costs of the lake and infrastructure for the life of the Project, with the renewal of commitment upon future renewal of the Project permit.	X	X	X	
AGFD-3	X	Southline will provide funding to improve riparian emergent wetlands on three historic ponds near Kansas Settlement Road. Wetlands will be constructed to AGFD specifications and adequately equipped with pumps, lines, and drains to ensure that wildlife values are maintained.	X	X	X	
AGFD-4	X	Southline will fund the removal of non-native flora and revegetation with native flora on the Willcox Playa Wildlife Area.	X	X	X	
LNB-1		All prickly pears (<i>Opuntia</i> spp.), cholla (<i>Cylindropuntia</i> spp.), and saguaro (<i>Carnegiea gigantea</i>) will be inventoried within the proposed ROW, and the potential to avoid or salvage each plant will be assessed. The priority will be avoidance when feasible.	X	X	X	
LNB-2		All suitable (e.g., healthy, undamaged, not flowering) prickly pear cacti that cannot be avoided will be salvaged using methods approved by the BLM/Western and FWS, but mature agaves will be given preference for avoidance when feasible. Plants salvaged from areas of permanent disturbance will be used to reclaim areas of temporary disturbance, or replanted outside disturbed areas if necessary.	X	X	X	
LNB-3		Other species of agaves such as <i>A. schottii</i> that are not primary food plants for nectar-feeding bats will be salvaged and used for reclamation in accordance with the Reclamation, Elevation, and Monitoring Plan.	X	X	X	
LNB-4		Saguaro less than 15 feet in height will be salvaged, unless prevented by site-specific conditions or poor plant health. Plants salvaged from areas of permanent disturbance will be used to reclaim areas of temporary disturbance, or replanted outside disturbed areas if necessary. Larger saguaros will be avoided whenever feasible, but will be topped or removed if necessary.	X	X	X	
LNB-5		Agave and saguaro salvage will be augmented, as necessary within 3 years after completion of initial restoration activities. Augmentation will occur within the ROW in areas of higher value to bats (e.g., in the vicinity of active roosts, within areas of high concentration of agaves). To achieve a goal of no net loss of forage plants, plant stocks from local sources or approved nursery-grown plants will be used.	X	X	X	
LNB-6		Salvaged plants will be monitored following reclamation for a period of 3 years, as described in the POD. Supplementary water will be provided if monitoring indicates that rainfall is insufficient to achieve the goal of no net loss of forage plants. Plant survival through the monitoring period will be reported annually to the BLM/Western and FWS.	X	X	X	
WF-1		All non-emergency construction and maintenance in riparian woodlands at the San Pedro River, Cienega Creek, and the Santa Cruz River will take place between September 15 and March 1, to avoid disturbance of breeding or nesting southwestern Willow flycatchers (<i>Empidonax traillii extimus</i>).		X		

Table 8. Environmental Protection Measures by Resource (Continued)

PCEN	Agency	Feature by Resource	Preconstruction	Construction	Operation and Maintenance	Decommissioning
WF-2 YBC-2		Line marking devices will be placed at the proposed crossings of the San Pedro River, Cienega Creek, Santa Cruz River, and the Wilcox Playa Wildlife Area, to minimize the potential for avian collisions with transmission lines.			X	
YBC-1		All non-emergency construction and maintenance in riparian woodlands at the San Pedro River, Cienega Creek, and Santa Cruz River will take place between September 15 and March 1, to avoid disturbance of breeding or nesting yellow-billed cuckoos (<i>Coccyzus americanus</i>).		X		
BAT-1		Construction activities that create sudden and sporadic loud noise (e.g., blasting) within 0.5 mile of the Volcano Mine complex will be restricted in the Spring (April 1 to May 31), departing on the presence of bats to protect maternity roosts and potential hibernacula.		X		
BO-CM		BLM and Western will work with FWS, AGFD, and NMDOCF to implement recovery actions for lesser long-nosed bat (<i>Lasiurus xanthinus</i>), Mexican long-nosed bat (<i>Lasiurus curasoae</i>), southwestern willow flycatcher, and yellow-billed cuckoo.		X		
BO-CM		BLM and Western will work with FWS, AGFD, and NMDOCF to participate in recovery planning and implementation of conservation actions for northern Mexican garter snake habitat, particularly on efforts to remove harmful nonnative species from occupied northern Mexican garter snake habitat.		X		
BO-CM		BLM, Western, and Soutline will use the smallest mesh size possible (<0.5 inch) for erosion-control products, or products that do not contain any mesh- or net-like attributes near occupied northern Mexican garter snake habitat. BLM, Western, and Soutline will refrain from using erosion-control products (such as wattle), that contain a mesh size of 0.5 inch (or 1.27 cm) within proposed critical habitat for the northern Mexican garter snake.			X	
BO-CM (appendix B)		Preconstruction surveys will take place in habitat classified as moderate or high suitability for the northern aplomado falcon (<i>Falco femoralis septentrionalis</i>) within the proposed ROW and a 1-mile buffer. Surveys should be conducted several times from January 15 to June 30 in order to detect breeding activity.		X		
BO-CM (appendix B)		All existing raptor nests or other large nests found during preconstruction surveys will be preserved in place, if possible, or relocated if necessary. No relocation of active nests will occur, and no nests will be relocated until after consultation with the Federal action agencies, State agencies, and FWS.		X	X	
BO-CM (appendix B)		Construction will not take place within 1 mile of occupied northern aplomado falcon nests between January 15 and September 1. Aplomado falcons are frequently observed on their breeding territories in southern New Mexico in January. Therefore, January 15 is the start date for seasonal restrictions.			X	
BO-CM (appendix C)		Preconstruction desert tortoise surveys will be conducted in suitable habitat. A WEAP that includes information on desert tortoises will be implemented. Any desert tortoises encountered during preconstruction surveys or during construction activities will be handled in accordance with the AGFD "Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects" (AGFD 2007).		X		